NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ DATE:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Biology Sexual Reproduction and Genetics (Chapter 10 Outline)**

*Vocabulary*: Define in your own words

Gene-

Homologous chromosomes-

Gamete-

Meiosis-

Haploid-

Diploid-

Crossing Over-

Allele-

Homozygous-

Heterozygous-

Genotype-

Phenotype-

Hybrid-

Polyploidy-

Briefly describe the following concepts:

What is the importance of meiosis in providing genetic variation? Explain. (2 pts)

How does meiosis differ from mitosis? How is meiosis similar to mitosis? Be specific in your explanations. (4 pts)

How does the reduction in chromosome number occur during meiosis? Explain. (2 pts)

What is the law of segregation and the law of independent assortment? Explain each law of genetics in detail. (4 pts)

Who was Gregor Mendel? What is the significance of of Mendel's experiments to the study of genetics? Explain. (4 pts)

Why is polyploidy important to the field of agriculture? Explain. (2 pts)

How can gene linkage be used to create chromosome maps? Explain. (2 pts)

**Write three things that you learned about Sexual Reproduction and Genetics***:*

*Make sure to write a full sentence.*

***Example sentence****: I learned that colorblindness is a X chromosome linked genetic disorder that affects more males than females.*

*1.*

*2.*

*3.*